

WHAT IS CLAIMED IS:

1 1. A securing device for securing engagement between a stem and a steering
2 tube which is received in the stem, of a bicycle, the securing device comprising:

3 a cap engageable with distal ends of both a clamping tube of the stem and the
4 steering tube;

5 a securing element movably received in the steering tube;

6 an abutting element deformably received between the cap and the clamping tube
7 for engagement with an inner periphery of the steering tube so as to force the steering
8 tube to securely engage with the clamping tube of the stem; and

9 means for driving the securing element to move so as to force the abutting
10 element to deform inside the steering tube.

11 2. The securing device as claimed in claim 1, wherein the abutting element has
12 two legs oppositely extending outward from a top board and each leg having an abutting
13 face perpendicularly formed relative to the top board for engagement with the inner
14 periphery of the steering tube.

15 3. The securing device as claimed in claim 1, wherein the cap has a through hole
16 defined through a first extension formed on a bottom face of the cap and a second
17 extension formed on a bottom face of the first extension.

18 4. The securing device as claimed in claim 2, wherein the cap has a through hole
19 defined through a first extension formed on a bottom face of the cap and a second
20 extension formed on a bottom face of the first extension.

21 5. The securing device as claimed in claim 4, wherein a limiting recess is
22 defined in a bottom face of the second extension to correspond to the top board so that
23 the top board is able to be received and limited in the limiting recess.

1 6. The securing device as claimed in claim 5, wherein each leg has a hook
2 formed on a free end of the leg.

3 7. The securing device as claimed in claim 1, wherein the securing element has a
4 stop formed on a top face of the securing element and having two truncated side faces
5 respectively and oppositely formed on a periphery of the stop.

6 8. The securing device as claimed in claim 2, wherein the securing element has a
7 stop formed on a top face of the securing element and having two truncated side faces
8 respectively and oppositely formed on a periphery of the stop.

9 9. The securing device as claimed in claim 4, wherein the securing element has a
10 stop formed on a top face of the securing element and having two truncated side faces
11 respectively and oppositely formed on a periphery of the stop.

12 10. The securing device as claimed in claim 6, wherein the securing element has
13 a stop formed on a top face of the securing element and having two truncated side faces
14 respectively and oppositely formed on a periphery of the stop such that the two hooks of
15 the abutting element are able to respectively engage with a corresponding one of the
16 truncated side faces and thus the abutting element is limited by the securing element.

17 11. The securing device as claimed in claim 4, wherein the abutting element has
18 a first hole corresponding to the through hole of the cap and the securing element has a
19 second hole corresponding to the first hole such that the driving means is able to extend
20 through the through hole, the first hole and into the second hole to drive the securing
21 element to move toward the cap and to force the two legs of the abutting element to
22 expand for engagement with the inner periphery of the steering tube.

23 12. The securing device as claimed in claim 5, wherein the abutting element has
24 a first hole corresponding to the through hole of the cap and the securing element has a

1 second hole corresponding to the first hole such that the driving means is able to extend
2 through the through hole, the first hole and into the second hole to drive the securing
3 element to move toward the cap and to force the two legs of the abutting element to
4 expand for engagement with the inner periphery of the steering tube.

5 13. The securing device as claimed in claim 9, wherein the abutting element has
6 a first hole corresponding to the through hole of the cap and the securing element has a
7 second hole corresponding to the first hole such that the driving means is able to extend
8 through the through hole, the first hole and into the second hole to drive the securing
9 element to move toward the cap and to force the two legs of the abutting element to
10 expand for engagement with the inner periphery of the steering tube.

11 14. The securing device as claimed in claim 10, wherein the abutting element
12 has a first hole corresponding to the through hole of the cap and the securing element has
13 a second hole corresponding to the first hole such that the driving means is able to
14 extend through the through hole, the first hole and into the second hole to drive the
15 securing element to move toward the cap and to force the two legs of the abutting
16 element to expand for engagement with the inner periphery of the steering tube.

17 15. The securing device as claimed in claim 1, wherein the driving means is a
18 bolt to extend through the cap, the abutting element and into the securing element to
19 threadingly connect to the securing element such that rotation of the bolt is able to drive
20 the securing element to move toward the cap to deform the abutting element.

21 16. The securing device as claimed in claim 11, wherein the driving means is a
22 bolt to extend through the cap, the abutting element and into the securing element to
23 threadingly connect to the securing element such that rotation of the bolt is able to drive
24 the securing element to move toward the cap to deform the abutting element and thus the

1 two legs of the abutting element are able to expand for engagement with the inner
2 periphery of the steering tube.

3 17. The securing device as claimed in claim 12, wherein the driving means is a
4 bolt to extend through the cap, the abutting element and into the securing element to
5 threadingly connect to the securing element such that rotation of the bolt is able to drive
6 the securing element to move toward the cap to deform the abutting element and thus the
7 two legs of the abutting element are able to expand for engagement with the inner
8 periphery of the steering tube.

9 18. The securing device as claimed in claim 13, wherein the driving means is a
10 bolt to extend through the cap, the abutting element and into the securing element to
11 threadingly connect to the securing element such that rotation of the bolt is able to drive
12 the securing element to move toward the cap to deform the abutting element and thus the
13 two legs of the abutting element are able to expand for engagement with the inner
14 periphery of the steering tube.

15 19. The securing device as claimed in claim 14, wherein the driving means is a
16 bolt to extend through the cap, the abutting element and into the securing element to
17 threadingly connect to the securing element such that rotation of the bolt is able to drive
18 the securing element to move toward the cap to deform the abutting element and thus the
19 two legs of the abutting element are able to expand for engagement with the inner
20 periphery of the steering tube.